

# EUROPEAN PATENT OFFICE

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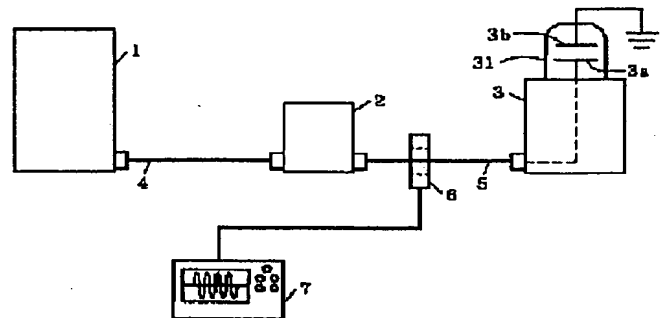
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TITLE : METHOD FOR MEASURING HIGH  
FREQUENCY CURRENT



**ABSTRACT :** PROBLEM TO BE SOLVED: To simply and correctly measure a high frequency current flowing in a coaxial cable together with waveform data without switching transmission routes, etc., by arranging a high frequency current transformer in the outer circumference of the coaxial cable and detecting a leakage current.

**SOLUTION:** In order to measure, for instance, a high frequency current at a plasma etching apparatus, a high frequency current transformer 6 of a clamp type or the like is arranged in the outer circumference of a coaxial cable 5 connecting a matching box 2 with an apparatus body 3. The coaxial cable of a structure, e.g. using a metallic mesh as an outside conductor has some external radiation. The radiation is detected by the high frequency current transformer 6 and observed, measured by an oscilloscope 7 or the like as a relative value and a waveform of the high frequency current. For example, each plasma parameter is adjusted on the basis of a result of the measurement. When a coaxial cable 4 between a high frequency power source 1 and the matching box 2 is measured in the same manner, a reflecting wave is detected as a difference and can be fed back to control the parameter.

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